

Course Syllabus — Management 686
Research Methods in Organizational Science II
Fall, 2004
Monday, 2:20-4:50pm, Room 4003 Wehner

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Lecture notes and other course materials can be downloaded from Portal:
<http://maysportal.tamu.edu/>

Course Description

The goals of this course are threefold: (1) to provide an overview of basic and advanced research method tools for conducting micro, macro, and meso organizational research; (2) to develop critical skills needed to plan for and evaluate empirical organizational research; and (3) to develop skills of actually using various organizational research methods. Most importantly, I hope this course will teach students to think about theories in their content domain, research methods and design, and statistics as three inter-related components of a unified system through which theories are developed, tested, and refined. Simply put, theoretical and methodological competencies are not, and should not be, mutually exclusive.

In line with its goals, the course covers three general areas: (1) measurement (i.e., experimental and non-experimental operationalizations of constructs); (2) research design (both experimental and observational designs); and (3) statistics. These three topics will be covered at fairly high level, with greater emphasis on integration among the topics and application of the various methods and techniques than on technical and mathematical proficiency of the material. However, I expect students to be able to learn much more about the topics covered following the course. That is, I hope the course would provide students with the basic tools needed to learn more on their own about these and other research methods and techniques.

Grading:

Grading will be based on exercises, a take-home final exam, and completion of a research paper. Although students will not be evaluated based on class participation, attendance is expected in all classes, and constructive participation in class discussions is highly encouraged. In total, students can earn up to 100 pts in the class, as follows:

1. *Exercises:* Students will be assigned 5 exercises throughout the semester, which are designed to help students master the various methods and techniques covered in the course. The exercises will require students to perform various data management and analyses of actual organizational data using SPSS. In addition, and equally

important, students will be asked to critically interpret results from analyses they conduct. Each exercise will be worth 10 pts, for a total of 50 pts.

2. *Take Home Final Exam*: Students will be given a set of 4 to 6 questions, and have a week to complete these questions. The questions will require students to critically think about and integrate among the topics covered in the course. Exams should be typed, and handed in as a set of 4-6 short papers. The final exam will be worth 20 pts.
3. *Final Research Paper and Presentation*: The major paper for the course will summarize an independent research project carried out over this and the previous two semesters. This should be the outcome of research proposed in Research Methods in Organization Science I. In addition to the actual paper, students will be asked to briefly present their completed research in class, similarly to how students might present their research in a conference (i.e., a 15 min presentation). The presentation will be worth a total of 10 pts., and the actual paper will be worth 20 pts, for a total of 30 pts.

ALL WRITTEN ASSIGNMENTS MUST BE SUBMITTED VIA THE PORTAL SYSTEM

Assigned Texts and Readings:

There are two assigned texts (P&S and SC&C – see below). In addition to the P&S and SC&C texts, several journal articles and book chapters will be assigned throughout the course. Some of the assigned readings provide technical background for the material covered, while others illustrate the application of the material in actual organizational research. Students are required to read various chapters and articles PRIOR to the class for which they are assigned. Students are also encouraged to purchase the Field (2002) book, to help with SPSS data analyses and interpretations. Lectures and class discussion will assume that students have read all assigned material prior to class – it is your responsibility to keep up with the readings.

Field, A. (2002). *Discovering statistics using SPSS for windows: Advanced techniques for beginners*. Thousand Oaks, CA: Sage.

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Lawrence Erlbaum. (P&S)

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental Designs for generalized causal inference*. Boston, MA: Houghton Mifflin. (SC&C)

Tentative Course Schedule

Note: SC&C = Shadish, Cook, & Campbell; P&S = Pedhazur & Schmelkin

1. August 30: Introduction

Assigned readings:

P&S, Ch 1

SC&C, Ch 1

McCall, M. W. & Bobko, P. (1990). Research methods in the service of discovery. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology*, 2nd ed., Vol. 1 (pp. 381-418). Palo Alto, CA: Consulting Psychologists Press.

Sackett, P. R. & Larson, J. R. (1990). Research strategies and tactics. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial & Organizational Psychology*, 2nd ed., Vol. 1 (pp. 419-489). Palo Alto, CA: Consulting Psychologists Press.

2. September 6: Validity in experimental designs

Assigned readings:

SC&C, Ch 3 & 4

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.

Sussmann, M., & Robertson, D. U. (1986). The validity of validity: An analysis of validation study designs, *Journal of Applied Psychology*, 71, 461-468.

3. September 13: Validity in observational designs

Assignment due: Exercise#1 (dataset manipulations)

Assigned readings:

P&S, Ch 3 & 4

Binning, J. F., & Barrett, G. V. (1989). Validity of personnel decisions: A conceptual analysis of the inferential and evidential bases. *Journal of Applied Psychology*, 74, 478-494.

Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes*, 67, 26-48.

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4, 62-83.

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, 1, 104-121.

4. September 20: Reliability theory

Assigned readings:

P&S, Ch 2 & 5

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*, 98-104.

DeShon, R. P. (2002). Generalizability theory. In F. Drasgow and N. Schmitt (Eds), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis*, pp. 189-220. San Francisco, CA: Jossey-Bass.

Schmidt, F. L., & Hunter, J. E. (1996). Measurement error in psychological research: Lessons from 26 research scenarios. *Psychological Methods, 1*, 199-223.

5. September 27: Factor analysis

Assigned readings:

P&S, Ch 8 & 22

Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: resolving a paradox for top management teams. *Academy of Management Journal, 39*, 123-148.

Law, K. S., Wong, C. S., & Mobley, W. H. (1998). Toward a taxonomy of multidimensional constructs. *Academy of Management Review, 23*, 741-755.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*, 272-299.

Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal, 35*, 505-538.

MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods, 4*, 84-99.

6. October 4: Review of ANOVA and regression (the General Linear Model)

Assignment due: Exercise#2 (factor analysis and reliability)

Assigned readings:

P&S, Ch 17 & 18

SC&C Ch 4, 5 & 8

Schweitzer, M. E., Ordóñez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal, 47*, 422-432.

7. October 11: Regression with categorical predictors

Assigned readings:

P&S, Ch 19 & 20

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum. – Ch. 8

8. October 18: Logistic regression

Assigned readings:

Bloom, M., & Michel, J. G. (2002). Relationships among organizational context, pay dispersion, and managerial turnover. *Academy of Management Journal*, 45, 33-42.

Hausknecht, J. P., Trevor, C. O., & Farr, J. L. (2002). Retaking ability tests in a selection setting: Implications for practice effects, training performance, and turnover. *Journal of Applied Psychology*, 87, 243-254.

Pedhazur, E. (1997). *Multiple regression in behavior research* (3rd ed.). Harcourt-Brace: Fort Worth, TX. – Ch 17

9. October 25: Moderated regression

Assignment due: Exercise#3 (Regression with categorical IVs and DVs)

Assigned readings:

P&S, Ch 19

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum. – Ch. 7

Cortina, J. M., & DeShon, R. P. (1998). Determining relative importance of predictors with the observational design. *Journal of Applied Psychology*, 83, 798-804.

Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44, 13-28.

Kirkman, B. L., Rosen, B., Tesluk, P. E., & Gibson, C. B. (2004). The impact of team empowerment on virtual team performance: The moderating role of face-to-face interaction. *Academy of Management Journal*, 47, 175-192.

10. November 1: Mediated regression

Assigned readings:

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

James, L. R., & Brett, J. M. (1984). Mediators, moderators, and tests for mediation. *Journal of Applied Psychology*, 69, 307-321.

Langfred, C. W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal*, 47, 385-399.

11. November 8: Multilevel analysis: Overview and aggregation

Assignment due: Exercise#4 (mediated and moderated regression)

Assigned readings:

- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analyses. In K. J. Klein and S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*, pp. 349-381. San Francisco, CA: Jossey-Bass.
- Chen, G., Mathieu, J. E., & Bliese, P. D. (2004). A framework for conducting multilevel construct validation. To appear in F. J. Dansereau & F. Yammarino (Eds.), *Research in multi-level issues: The many faces of multi-level issues* (Vol. 3). Elsevier: Oxford, U.K.
- Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*, pp. 3-90. San Francisco, CA: Jossey-Bass.

12. November 15: Multilevel analysis: Cross-level tests

Assigned readings:

- Bliese, P. D. (2002). Using multilevel random coefficient modeling in organizational research. In F. Drasgow & N. Schmitt (Eds.), *Advances in measurement and data analysis*, pp. 401-445. San Francisco, CA: Jossey-Bass.
- Chen, G., & Bliese, P. D. (2002). The role of different levels of leadership in predicting self and collective efficacy: Evidence for discontinuity. *Journal of Applied Psychology*, 87, 549-556.
- Hofmann, D.A. (1997). An overview of the logic and rationale of hierarchical linear models. *Journal of Management*, 23, 723-744.
- Liu, H., & Chuang, A. (2004). A multilevel investigation of factors influencing employee service performance and customer outcomes. *Academy of Management Journal*, 47, 41-58.

13. November 22: Multilevel analysis: Growth modeling

Assigned readings:

- Bliese, P. D., & Ployhart, R. E. (2002). Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods*, 5, 362-387.

- Chen, G. (in press). Newcomer adaptation in teams: Multilevel antecedents and outcomes. *Academy of Management Journal*.
- Chen, G. & Ployhart, R. E. (2004, April). *Time for a change: Towards a theory of performance change*. Paper presented at the 19th Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Thoresen, C. J., Bradley, J. C., Bliese P. D., & Thoresen, J. D. (in press). The big five personality traits and individual job performance growth trajectories in maintenance and transitional job stages. *Journal of Applied Psychology*.

14. November 29: Class Presentations

15. December 6: Meta-Analysis

Assignment due: Exercise#5 (Multilevel analyses)

Assignment due: Research Paper

Note: Final Exam Handed Out

Assigned readings:

- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42, 674-686.
- Eden, D. (2002). Replication, meta-analysis, scientific progress, and AMJ's publication policy. *Academy of Management Journal*, 45, 841-846.
- Murphy, K. R., & Newman, D. A. (2003). The past, present, and future of validity generalization. In K. R. Murphy (Ed.), *Validity generalization: A critical review*, pp. 403-424. Mahwah, NJ: Erlbaum.
- Phillips, J. M. (1998). Effects of realistic job previews on multiple organizational outcomes: A meta-analysis. *Academy of Management Journal*, 41, 673-690.
- Rothstein, H. R., McDaniel, M. A., & Borenstein, M. (2002). Meta-analysis: A review of quantitative cumulation methods. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis*, pp. 534-570. San Francisco, CA: Jossey-Bass.

16. December 14: Final Exam Due

Assignment: Hand in final exam paper by no later than 12 noon, in Gilad's mailbox.